



CLIENT: POLYGAL, INC.
P.O. Box 410592
Charlotte, NC 28273
Ward Ogle

Test Report No: 97808-1	Date: May 9, 2007
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SAMPLE ID: The Client submitted and identified the following test material as Polygal 16mm Titan Sky Multi-wall Polycarbonate Panel.

DATE OF RECEIPT: Entered into SGS USTC sample tracking system on April 20, 2007.

TESTING PERIOD: May 4, 2007.

AUTHORIZATION: Testing authorized by Ward Ogle.

TEST REQUESTED: Perform standard flame spread and smoke density developed classification tests on the sample supplied by the Client in accordance with ASTM Designation E84-05, "Standard Method of Test for Surface Burning Characteristics of Building Materials". The foregoing test procedure is comparable to UL 723, ANSI/NFPA No. 255, and UBC No. 8-1.

TEST RESULTS:	<u>Flame Spread</u>	<u>Smoke Density</u>
	65	200*
	For detailed results see page 3.	
	* See note on page 3.	

Tested by


Brian Ortega
Test Technician

**Signed for and on behalf of
SGS U.S. Testing Company Inc.**


Greg Banasky
Supervisor Fire Technology

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PREPARATION AND CONDITIONING: The sample material was submitted in three pieces, 22" wide by 8' long, conforming to test chamber dimensions. The sample was supported during testing by 2" hexagonal mesh poultry netting running the length of the test chamber and 1/4" round metal rods placed at two foot intervals across the width of the test chamber.

Prior to testing, the specimen was placed in the conditioning room (maintained at $73.4 \pm 5^\circ$ F and a relative humidity of $50 \pm 5\%$) and allowed to reach moisture equilibrium.

SUMMARY OF ASTM E84 RESULTS: Because of the possible variations in reproducibility, the results are adjusted to the nearest figure divisible by 5.

<u>SAMPLE IDENTIFICATION</u>	<u>FLAME SPREAD</u>	<u>SMOKE DENSITY</u>
Polygal 16mm Titan Sky Multi-wall Polycarbonate Panel	65	200*

* See note on page 3.

In order to obtain the Flame Spread Classification, the above results should be compared to the following table:

<u>NFPA CLASS</u>	<u>UBC CLASS</u>	<u>FLAME SPREAD</u>	<u>SMOKE DENSITY</u>
A	I	0 through 25	Less than or equal to 450
B	II	26 through 75	Less than or equal to 450
C	III	76 through 200	Less than or equal to 450

BUILDING CODES CITED:

1. National Fire Protection Association, ANSI/NFPA No. 101, "Life Safety Code", 1994 Edition.
2. Uniform Building Code, 1994 Edition, Chapter 8, Interior Finishes, Sections 801-807.



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E 84 TEST DATA SHEET:

CLIENT: Polygal, Inc. **DATE:** 05/04/07

SAMPLE: Polygal 16mm Titan Sky Multi-wall Polycarbonate Panel

FLAME SPREAD:

IGNITION: 1 minute 3 seconds

FLAME FRONT: 19.5 feet maximum

TIME TO MAXIMUM SPREAD: 4 minutes, 31 seconds

TEST DURATION: 4 minutes 33 seconds

CALCULATION: $4900/(195-119.34) = 64.76$

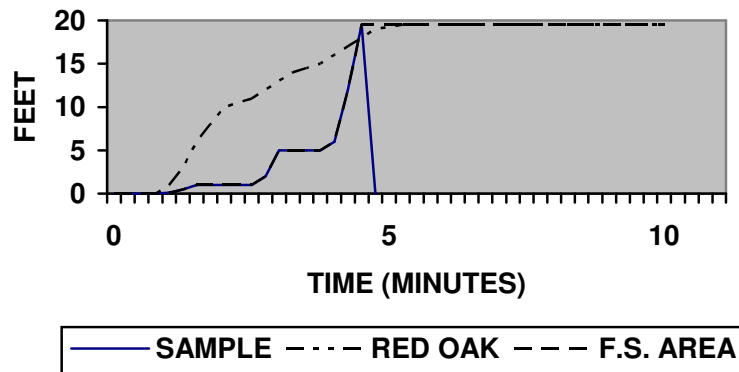
SUMMARY: FLAME SPREAD: 65 SMOKE DENSITY: 200*

OBSERVATIONS: Sample surface ignition occurred at 1 minute 3 seconds. A maximum flame front advance of 19.5 feet was observed at 4 minutes, 31 seconds. Floor burning was noted commencing at 2 minutes..

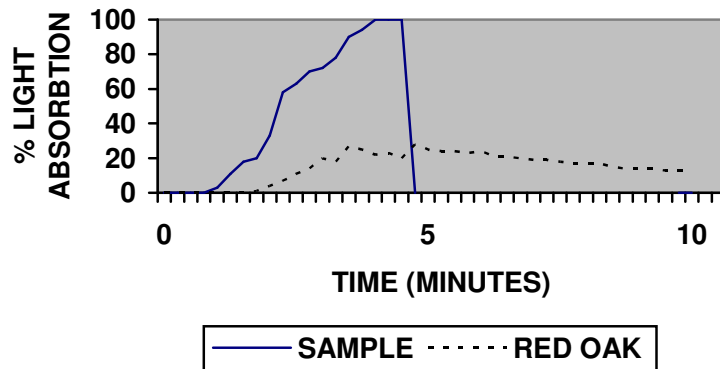
* Due to lack of air flow through the test chamber, the test was terminated at 4 minutes, 33 seconds. Had the test continued for the normal 10 minute period, the Flame Spread would have remained the same.

Note: The Smoke Developed number was the value at time of termination.

FLAME SPREAD POLYGAL 16MM TITAN SKY MULTI-WALL POLYCARBONATE PANEL



SMOKE DENSITY POLYGAL 16MM TITAN SKY MULTI-WALL POLYCARBONATE PANEL



End of Report